Program Integrity

Addendum C   Statistical Sampling for Overpayment Determinations and Identification of Probable False Claims

In each case where the purpose is to determine the probable scope and extent of overpayments, regardless of how the overpayment was incurred, the sample must be calculated at a ninety (90) percent confidence level with a precision of plus or minus ten (10) percent and a fifty (50) percent occurrence rate. The fifty (50) percent occurrence rate is used when there is no established rate of occurrence. If the occurrence rate is known by a previously documented statistically valid analyses of the units of audit (e.g., same provider, same procedures, same time period) of the possible fraudulent practice by a Federal health care entitlement program, that variable may be used to calculate the sample. A computer based statistical program shall be used to calculate the sample size using the parameters discussed above. The sample shall be selected using random numbers generated by an electronic random number table using a known seed number. A known seed number allows for the generation of additional random numbers for replacement to select additional claims and medical records as necessary. An oversample of twenty (20) percent shall always be requested for the beginning of an audit. The universe of claims shall not include denied claims nor individual adjustments. All adjustments must be adjusted back to the original claim to demonstrate the current final adjudication. All duplicates and potential duplicates (four or more matches to the current duplicate claim check policy as mandated by the OPM Part Two, Chapter 1) to a separate file on electronic media.

In all claim audits using statistical techniques to extrapolate findings of a sample to a universe of claims, the audit addresses the average overpayment per claim as the single unit of measurement. The claim and the explanation of benefits are the evidentiary documents which demonstrate the billed services submitted by a provider or beneficiary and the payments made to a provider or beneficiary. The claim is compared to the contents of the medical record to validate whether a service was provided, whether it was provided at the level billed, whether it was provided by the authorized provider shown on the claim, or any other data which may be relevant to a dollar loss to the Government or a contractor. This information shall be recorded on a spreadsheet generated by Lotus 1-2-3, or compatible software, with a W-K file extension spreadsheet for compatibility with other widely used spreadsheet software. Each claim in the sample is totaled for an overpayment or no overpayment. No overpayment for a claim must be placed in the array of the total sample calculation as 0 (zero).

The overpayments are expressed in dollars and cents. The total is then summed and divided by the number of claims in the sample (remembering that claims with no overpayments are shown in the column to be summed as 0 (zero)). The product is the average mean overpayment per claim in the sample. The average mean overpayment per claim in the sample is multiplied by the number of claims in the universe from which the sample was taken and this product expressed in dollars and cents is the probable dollar loss to the Government or contractor.

To demonstrate the validity of the sample, it is necessary to calculate the standard deviation of the average mean of the sample and the standard error of the sample. The contractor shall have the electronic capability to accomplish this check of validity. In order to establish the actual confidence level for any given sample, it is necessary to calculate the standard deviation of the sample and, subsequently, the standard error of the average mean.

In the sample technique discussed above, if the sample has been properly designed and selected, there is a probability that ninety five (95) out of one hundred (100) observations (claim overpayments) will fall within the range of the arithmetical mean plus or minus 1.96 times the calculated standard deviation. The standard deviation is determined by calculating the difference between each claim observation and the average mean, and squaring the product. The total of the squared differences is summed and divided by the number of observations in the sample. The squareroot of this calculation is the standard deviation expressed in dollars and cents. If the standard deviation is greater than 1.96 times the arithmetic mean, this is an indicator that the sample does not demonstrate the confidence level required for validity.

The standard error of the arithmetic mean expresses the range of variance around the mean in dollars and cents. The standard error of the mean is calculated by finding the square root of the sample size and dividing this product by the standard deviation. The high and low (plus or minus) estimate of overpayments can be calculated by adding or subtracting the standard error calculation from the original arithmetic mean and multiplying the plus or minus product by the universe of claims.

If there are services subject to audit where there are large differences in payments, e.g., surgical and medical, there will be a necessity to stratify the services shown on claims to two or more separate categories. Please seek consultation for such sample techniques from a certified statistician.

The standard reference for auditing with samples is the Handbook of Sample for Auditing and Accounting, Third Edition, by Herbert Arkin, McGraw-Hill Book Company, copyright 1984.